automated system accurately identified 76 (79.2%), VITEK MS identified 93 (96.6%), and BioTyper identified 90 (93.8%) of the total 96 isolates.
Conclusion: Both Bruker ID MS and Vitek ID MS were superior to conventional phenotypic methods for the identification of BHS.

OS 2-1

EFFICACY OF A LOCAL HOSPITAL TO ADVOCATE CVC BUNDLE CARE FOR DECLINING BLOOD STREAM INFECTION

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Purpose: Central-line associated blood stream infection (CLABSI), which results in extended hospital stay, more medical cost and even mortality, is mandatory to prevent. Thus, our hospital takes part in the CVC bundle care plan since 2013 and extends to more wards this year. Our efficacy of promoting CVC bundle care in our hospital this year is shown here.
Methods: We set up a special group led by our assistant administrator and hold a meeting each quarter. Education training activity, online learning classes and benchmarking are principal parts of our focus. Moreover, we try our best to reach online sheets to raise the completeness of check sheets and will accomplish in 2015. Two major changes of CVC bundle care proposed by Centers for Disease Control (CDC) this year are maximal barrier precautions (a 305 × 172 cm drape) and intensive catheter care (Wipe IV lock hard for 15 seconds with alcohol swab before using it). We obey the guideline of CVC bundle care seriously ; therefore, our check results by auditors form our infection control room or other hospitals are outstanding, only with a tiny default.
Results: Indicators for monitoring infection, like CLABSI, in all participant wards let up significantly and one ward attains zero tolerance for 15 months. Fortunately, we win innovation excellence award and golden prize of poster display.
Conclusions: We really get great efficacy from the plan and will continue to adhere to CVC bundle care demurely and reach the goal of zero tolerance with our cooperation and insistence to abate infection rate and boost medical quality.

OS 2-2

IMPROVEMENT ON HOSPITAL ENVIRONMENT HYGIENE TO CONTROL THE SPREAD OF MULTIPLE-DRUG RESISTANT ORGANISMS (MDROS)

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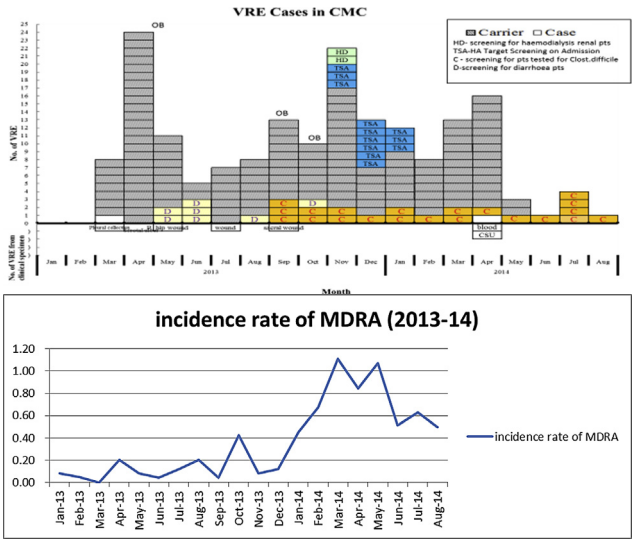
Purpose: Increasing evidences support the important role of contaminated environment in transmission of several key MDROs (MRSA, VRE, MDRA, Clostridium difficle and norovirus). The study in CMC also found that there were rooms for improvement on cleaning services.
Methods: The cleaning service on environment in hospital has been improved by:

1. Set ups a multi-disciplinary working group to look into cleaning services and standard.
2. Carry out study/audits to assess the environmental contamination and evaluate the effectiveness of cleaning standard.
3. Set up a Central Cleaning Team to enhance the cleaning service.
4. Develop the hospital guideline on environment / equipment cleaning and disinfection
5. Implement the color code system for cleaning service.
6. Employ high technology - Hydrogen Peroxide Vaporization for disinfection
7. Introduce the usage of 2-in-1 high level disinfectant and disposable wipes
8. Provide intensive and tailor-made trainings to cleaning staff

Results:

1. Additional resources is available to improve the cleaning service
2. Cleaning /disinfection standard for hospital environment available to guide the practices
3. Cleaning staff's competence is ensured through regular training and assessment
4. The spread of pathogens such as VRE and MDRA in hospital are under control



Conclusions: With the supports from hospital and through various improvement strategies, the environmental hygiene is improved and thus reducing the impact of healthcare-associated infections to patients.

OS 2-3

IMPLEMENTATION OF BUNDLE CARE FOR PREVENTION OF CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTION AT INTENSIVE CARE UNITS

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Purpose: Bloodstream infection (BSI) is one of the serious healthcare associated infections resulting in high mortalities and costs. Central line is the leading infection focus of healthcare associated BSI at hospitals. Institute of Healthcare Improvement (IHI) has suggested implementation of bundle care to prevent central line associated bloodstream infections (CLABSI).
Methods: National Taiwan University Hospital (NTUH) is a 2500-bed medical center located in northern Taiwan which provides primary and tertiary medical care.The infection control team has implemented bundle care at intensive care units(ICU) with special focus on BSI prevention since 2009.We retrospective by evaluate its efficacy on decreasing BSI during implementation of bundle care.
Results: A 5 item-BSI care bundle modified from that of the Institute of Healthcare Improvement (IHI) at eight MICUs were implemented at NTUH. A multidisciplinary teamwork and computerized system were involved in this bundle care. This study analyses the MICU central line utilization and BSI density between Jan 2011 and Sep 2014 to assess the BSI bundle impact in a clinical setting. Totally 106,504 MICU patient days were analyzed. The compliance rate of healthcare workers to 5-elements was 94.1% during the study period. CABSI were decreased from 6.1‰ in 2011 to 3.3‰ in 2014. The CRBSI were decreased from 0.61‰ in 2011 to 0.37‰ in 2014. The utilization of central lines were 53.5% in 2011 and 57.9% in 2014 respectively.
Conclusions: Implementation of BSI bundle care significantly decreases the incidence of CLABSI at ICU. Multidisciplinary teamwork, education and a

comprehensive checklist to improve healthcare workers' compliance are the keys to success.

OS 2-4

EVALUATION ON A BUNDLE OF INFECTION CONTROL INTERVENTIONS AGAINST AN INFECTION CAUSED BY TICK BORNE PATHOGENS: A RETROSPECTIVE COMPARATIVE STUDY

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Purposes To evaluate different bundle of infection control interventions against an infection caused by tick borne pathogens.
Methods In May, 2014, our hospital received and cured 4 patients with severe fever with thrombocytopenia syndrome (SFTS) caused by a *novel bunyavirus*. A bundle prevention intervention was implemented. These strategies included (1) report epidemic situation timely with a high degree of vigilance, (2) confirm goal and full-support, (3) strengthen training, avoid missed diagnosis, (4) disinfection and isolation, comprehensive protection (described Table 1 in detail), (5) supervise of project implementation all-the-way. The present study aims to evaluate the effectiveness of this measure by comparing to the conventional measures in 2006, where a *human granulocytic anaplasmosis*, having a same transmission mode with *novel bunyavirus* related SFTS, was outbreak.
Results Before new measures conducted, in 2006, the secondary attack rate of *human granulocytic anaplasmosis* was 23.08%, consisting of 16.67% (4/24) and 33.33% (5/15) for health care workers and family members, respectively (Figure 2). While after implementation of a prevention care bundle, no secondary attack SFTS patients was observed in the hospital with a significant lower hospital acquired secondary attack rate than *human granulocytic anaplasmosis* infection in 2006 ($\chi^2 = 45.28$, $P < 0.001$).
Conclusions Our new bundle measures against infections caused by tick borne pathogens is rather effectiveness.

OS 2-5

NURSE DIRECTED INTERVENTIONS TO REDUCE THE CATHETER ASSOCIATED URINARY TRACT INFECTIONS IN AN INTENSIVE CARE UNIT IN SOUTHERN TAIWAN

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Purpose: To implement the care bundle for the catheter associated urinary tract infection (CAUTI) to reduce the CAUTI, improve care quality and patient safety.
Methods: In August 2013, a surveillance before implementation of new care bundle was conducted with focus on knowledge of health care workers (HCWs), timing and procedures of catheter removal, educations and audits. An I-CARE intervention was performed in September 2013 with coordinated strategy comprised of (1) poster and computerized based informations on catheter insertion and care (2) I-CARE slogan: Indication, Clean, Aseptic, Remove-early, Easy and smooth (3) team works with focus on nurse oriented catheter removal mechanism (4) standardized care procedures (5) real time feedback data on CAUTI infection density and numbers of successfully removal of urinary catheter (6) education and audits. The utility rate of catheter use at baseline and after intervention was analyzed by Chi-square or Fisher's exact tests, and the infection density was compared using the Student's T test.
Results: The CAUTI was significantly decrease in the intervention period (September 2013 to January 2014) compared to the baseline (August 2013), with the infection density 7.4 ‰ in the intervention period v.s 12.6‰ at baseline ($p = 0.030$). The catheter utility rate was also decreased significantly (76.5% v.s 67.7%, $p = 0.020$). This intervention accounted for 78% (52/67)decrease of unnecessary catheter insertion. Although 24% of the patients were re-inserted urinary catheter after removal for 6 hours, a total of 10% of the patients had residual urine less than 200cc.
Conclusions: The nurse directed I-CARE UTI care bundle was effective in reduction of CAUTI. The residual urine evaluation by sonogram can decrease the unnecessary urinary catheter reinsertion.

OS 2-6

EVALUATION OF SEQUENTIAL ENHANCED CLEANING TO REMOVE MULTIDRUG-RESISTANT ORGANISMS ON HIGH-TOUCH SURFACES IN MEDICAL INTENSIVE CARE UNIT

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Table 1 Project implementation table of the daily regular disinfection for the wards which *novel bunyavirus* infected patients live in (OS 2-6)

Site of environment disinfection	Methods of disinfection	Time of disinfection	Data	Signature of executor	…	…
Air sterilization in bed-wards	a) Air disinfection machine; b) Ventilation by windows opening	5a.m—7a.m 5p.m—7p.m; 7a.m, 7p.m				
Air sterilization *in ward corridor*	Ultra-violet lamp (>75 uW/cm^3)	5a.m—6a.m 5p.m—6p.m				
Ward's floor	*Mop the floor using* Chloros (1000mg/L)	7a.m 7p.m				
Ward's surface	Cavi wiping	8a.m 8p.m				
Ward's corner like the floor under the bed	Pesticide spray	6p.m				

Purpose: Contaminated environmental surfaces are an important source for transmission of Multidrug-Resistant Organisms (MDRO). Effective cleaning of hospital rooms is necessary to prevent transmission. We investigated the effects of sequential enhanced cleaning measures by culturing high-touch surfaces in a medical intensive care unit (MICU).
Methods: A prospective intervention study was conducted during a 13-month period in the 25-bed MICU. The study comprised a baseline period (period 1) and 3 sequential tiered interventions periods: each cleaning unit was wiped with 1 clean microfiber cloth daily (period 2), use of fluorescent markers and adenosine triphosphate (ATP) bioluminescence to monitor and feedback the quality of cleaning (period 3), and wiping 1 cleaning unit with 3 clean microfiber cloths daily (period 4). Methicillin-resistant staphylococcus aureus (MRSA), extended-spectrum β-lactamase (ESBL)-positive enterobacteria and vancomycin-resistant enterococci (VRE) were used as marker organisms and we performed cultures of environmental samples once a month.
Results: In the period 1, 16.1% (112/695) of MICU high-touch surfaces had positive cultures of MDRO, whereas during periods 2, 3, and 4 the mean